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# FOOD NEWS

**FOR CONSUMERS**

Volume 8 Number 4 Winter 1992

United States Department of Agriculture  
Food Safety and Inspection Service

## FIND THE FOOD MISTAKES

*Answers in box, p. 3*

**Special Issue**

**Food Safety—**

**Focus on Children**





# FOOD NEWS

Winter 1992  
Vol. 8, No. 4

Food News for Consumers is published by USDA's Food Safety and Inspection Service, the agency charged with ensuring the safety, wholesomeness and proper labeling of the nation's meat and poultry supply. The magazine reports how FSIS acts to protect public safety, covering research findings and regulatory efforts important in understanding how the agency works and how consumers can protect themselves against foodborne illness.

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## Focusing on Food Safety for Children

*A Message from the Manager of  
FSIS's Meat and Poultry Hotline,  
Susan Templin Conley*

Welcome to our special issue on Food Safety for Children! Statistics show that with the increase of dual-career families, single-parent homes and busier lifestyles, more than 50 percent of children are in daycare centers each day. Some 7 million kids are caring for themselves and siblings after school. Teens and infants also present special food safety concerns for parents.

But for me, the statistics have been brought close to home—to my home! It's several hours between the time my twelve-year-old daughter Melinda returns home from school hungry, and my arrival time at the end of the workday. She often fixes a snack for herself and friends, and sometimes even starts the dinner preparations.

This scene is repeated over and over in households across the country. Surveys show that 63 percent of kids 12 and under are not only actively participating in the family food selections, but many are cooking the food as well. Often these children are cooking and using appliances like the microwave oven without adult supervision.

And if parents aren't yet worrying about the food preparation techniques of their teens or pre-teens, they are likely to be concerned about food handling practices at the daycare center. New parents wonder about safe methods for handling infant formula, breast milk and baby food.

That's why we decided to dedicate this special *Food News for Consumers* to children's issues. The food safety concerns we face in feeding our children are very important.

I think you'll really enjoy this issue. It's packed with practical advice for parents and for children of all ages. Plus, it's fun... check-out the refrigerator messages for kids fixing food after school, and the memo from a typical (is there such a thing?) teenager's brain to his stomach! So dig-in, enjoy, and spend a little food-time with a child today! Mindy and I will be baking.



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(2) Leaving refrigerator-type food on counter  
Girl - (3) About to burn herself because she's not tall enough to use the microwave  
Sink - (4) No one should use these dirty dishes! Always use clean dishes, knives and forks  
Table - (5) Keep dirty bookbags, play equipment and papers off table where you fix or serve food  
  
Keep kitchen clean

*More on safe food handling for kids, p. 4*



# Before Parents Get Home— Food Safety After School

by Pat Moriarty, R.D.\*

From front door...to refrigerator door. The favorite afternoon pastime of school children remains "snacking." But what if mom or dad isn't home to make the snack? What's a hungry kid to do? It's been estimated that roughly 7 million American kids either care for themselves after school or are cared for by a sibling. What are the most important

food and kitchen safety facts

you should teach your children? Read on for our crash course in "Safe Snacking 101."

While most older kids can easily prepare their own snack, it is critically important to educate them about the larger issues of food and kitchen safety. In fact, you should establish basic "Kitchen Rules" and consider putting them in writing. And always keep on hand a ready supply of snacks that you know your child can easily handle alone.

Whether your child chooses a cold snack, a ready-to-eat snack, a do-it-yourself snack or a hot snack, it's never too early to teach children about the importance of clean hands, utensils, and other basic food safety techniques.

Here's a basic beginner's course written so both you and your youngsters can read it.

## Kids, for food safety:

1. Place books or bookbags on the floor, not on eating counters or the kitchen table.
2. Throw away leftover sandwiches or other "refrigerator type" foods you bring home.
3. Wash your hands before you make or eat a snack. Hands carry lots of germs.
4. Always use clean spoons, forks and plates.
5. Wash fruits and vegetables with water before you eat them.
6. Do not eat bread, cheese or soft fruits or vegetables that look bad or have even small spots of mold.
7. Do not leave cold items, like milk, lunchmeat, hardcooked eggs or yogurt, out on the counter at room temperature. Put these foods back in the refrigerator as soon as you've fixed your snack.

But what if your child wants a hot snack? Should you let your child use the microwave? According to a recent Good Housekeeping/International Microwave Power Institute study, children are frequent users of the household microwave. Fifty-two percent of the respondents said that their children under the age of 12 use the microwave. The average age at which children begin to use the microwave is 7. In general, parents perceive the microwave oven to be a safe cooking appliance. For this reason, they let children use the microwave, but not a gas or electric range.

HOWEVER, PARENTS SHOULD KNOW THAT SEVERE BURNS CAN AND DO OCCUR FROM IMPROPER MICROWAVE USAGE. Special packag-

## Mistake:



## Mistake:



\* Registered Dietitian



4. Rotate food in the microwave and stir halfway through cooking if possible.
5. Use pot holders to remove items from the microwave. Microwavable dishes get hot from cooked food. Do not use the microwave if you have to reach up to remove food from the oven.
6. If a dish is covered with plastic wrap or wax paper, turn up one corner to let excess steam escape. Pull plastic wrap off foods so steam escapes away from hands and face. Steam can burn.

### **Here are specific tips for favorite foods:**

- **Hotdogs and Baked Potatoes.** Pierce before cooking. This keeps them from exploding.
- **Jelly Donuts and Fruit Pastries.** Break open before eating. The jelly or fruit inside can get very hot and burn your mouth.
- **Popcorn.** Let the bag sit for several minutes before opening. Steam from the bag can burn the face, eyes, arms and hands.

Never pop any food right from the microwave into your mouth. Allow the food to cool for several minutes before eating.

Here are some suggested snack ideas for younger children (ages 5-10) and older children (11 and up).

### **Snacks for Younger Children**

- peanut butter and jelly sandwiches
- cheese and crackers
- yogurt
- cookies and milk
- fresh fruit
- precut vegetables
- hardcooked eggs
- cold cereal and milk
- lunchmeat sandwiches

### **Mistake:**



### **Snacks for Older Children**

- microwave popcorn
- microwave snacks and meals
- items requiring cutting with a knife
- items requiring can openers
- leftovers requiring heating

For your other microwave and safe food handling questions, call USDA's Meat and Poultry Hotline 1-800-535-4555, weekdays 10-4 (EST). Washington, D.C., area residents dial 202-720-3333. ☎

### **Other Resources**

Parents, for a free copy of *Project Home Safe*, call 1-800-252-SAFE. Produced by the American Home Economics Association, the kit provides a variety of resources for solutions to the after school child-care problem.

ing for kids' favorite foods like popcorn, pizza and french fries can get too hot for kids to handle. Steam from popcorn bags can burn the eyes, face, arms, and hands. Jelly donuts, pastries, hotdogs and other foods can reach *scalding* temperatures in seconds. The U.S. Consumer Product Safety Commission estimated that nearly 1,300 children under the age of 15 suffered microwave-related burns in 1990.

If you give permission for your child to use the microwave, start by holding a Saturday morning training session. It is recommended that only children who can read be allowed to use the microwave. This is what they need to know.

### **Kids, for safe microwaving:**

1. Never turn on an empty oven. This can cause the oven to break.
2. Read package directions carefully. Make sure you know how to set the microwave oven controls (for example, 10 seconds, rather than 10 minutes).
3. Use only microwave-safe cookware. Mark specific utensils and containers for microwave use and keep them in a certain place. Never re-use cold storage containers such as margarine tubs.







# Attention, Teens: **A Concerned “Stomach” Talks Food Safety**

**Y**ou’ve heard the expression, “If only the walls could talk!” Well, what if a teenager’s stomach could communicate with him? It might go like this:

MEMORANDUM

To: Brain

From: Stomach

Subject: Taking Care of Me

Hi, remember me? I’m the one you shove that food into—those cold pizzas, warmed-over nachos and tacos and hamburgers that were left out on the counter too long. You know what I mean.

Look, I know you are a teenager, but how you and I have survived so far beats me. For both our sakes’ may I offer some friendly food safety advice that may help us get into adulthood?

by Herb Gantz

After all, I am not really made of cast-iron as you may think. Now that you have been asked by Mom and Dad to prepare another dinner for the family, I would like to offer some food safety and preparation advice.

The statistics say that one of every seven teenagers prepares the family dinner at least three times a week. Lucky me, you have to be the one in seven! Well, it’s time you learn what food safety is all about.

Maybe this time you will listen to me. I’ve sent enough warnings to you in the past, but last night’s meal was the last straw. This memorandum is ‘do or die’ for both of us—and for the family as well.

1. SHOPPING. Okay, the next time you are in the grocery store, try to be more careful.

For example, please read the labels

carefully. If the words “keep refrigerated” appear on a label, make sure the item is cold to the touch in the store and then get the perishables home right away. Forget about running errands on the way home and stopping off at a friend’s house. Go right home. PLEASE!



Also, make sure the packages are not torn or opened. You and I both know that you have not been so careful in this department.

And when buying cans, remember what I said about those that may be bulging or otherwise deformed. Also look out for rust marks and cans that may be leaking.

## 2. COOKING INSTRUCTIONS.

Okay, now you are going to have to carefully read the labels for cooking instructions. If you are microwaving, do both of us a favor and don't confuse cooking times for the conventional oven with those for the microwave. There's a BIG difference. The conventional oven takes much longer. WE certainly remember what you did last week, don't WE?

3. THE MICROWAVE. When using the microwave, PLEASE watch the cooking levels. Don't microwave on 'HIGH' when the instructions say 'DEFROST' or 'SIMMER.'

While we are in the microwave department, don't forget to use the appropriate cookware for thawing and cooking in the microwave. Foam and plastic, in case you have forgotten, may melt.

And don't forget to cover foods in the microwave so that steam will help cook them evenly. When finished, uncover microwaved foods away from your face. This also helps extremely hot foods cool down. Let the food stand for a few minutes so temperatures can even out. That way, you don't burn me!

4. THOROUGH COOKING. Whether you are microwaving or using the conventional oven, it takes thorough cooking to kill harmful bacteria. Forget the heroics and don't eat raw or partially cooked meat, poultry, fish or eggs.

Let's make a pact. From now on, will you cook red meat to 160 degrees Fahrenheit and poultry to 180 degrees? If you can't find the meat thermometer, at least make sure the meat is brown or gray inside. Poultry juices should run clear and fish should flake with a fork.

5. SERVING FOOD. Now let's go over a few basics on proper serving.

Use clean dishes and utensils to serve food, not those you left out on the

counter from the meal before. Never leave perishable food out of the refrigerator for over two hours! That's TWO, please!

As for your parties, I still remember the one from last weekend. Will you please keep cold party food on ice for a change—or serve from platters taken from the refrigerator?

Also, divide hot party food into smaller serving platters. Keep them in the refrigerator and warm them up just before serving. I would appreciate that. Our friends would appreciate it too.

6. LEFTOVERS. Let's talk leftovers. Boy, have you done a number on me here a couple of times. PLEASE refrigerate perishable food within two hours, not two days! Don't leave that pizza out on the counter overnight! And divide large amounts of leftovers into small, shallow containers for quick cooling in the refrigerator.

7. REHEATING. Here's another delicate subject. Contrary to what you may think, leftovers do have to be thoroughly reheated, even though they were cooked once before.

Bring sauces, soups and gravy to a boil. Use a meat thermometer to make sure leftovers reach 165 degrees

Fahrenheit.

8. CAUTION! I know you don't like red lights, but here are the real red lights in food handling. NEVER taste food that looks or smells strange to see if you can still use it. Remember what I said before? I am not cast-iron. Wrap and discard suspect food carefully so animals can't get into it.

As for moldy food, the mold you see is only the tip of the iceberg. The mold can be underneath as well. So most moldy food should be pitched.

You can save some food, however. Hard cheese, salami, firm fruits and vegetables can be saved by removing a large area around the mold.

Congratulations, you have now graduated from Basic Food Safety, Steps 1-8. If you will just follow these simple, commonsense rules, you could save me and yourself a lot of stomachache—or is that heartburn?

Remember that case of the "flu" you had a while back? I've got news for you, that was food poisoning, not the flu. Millions of people, including many teenagers like you, get sick every year because of improper food handling. Just a little more care will take care of you and me! ☺

## FAST FACTS ON FAST FOODS

- Eat pizza, hamburgers, nachos, tacos, fried chicken and other fast food items right away. Don't leave food out on the counter or in a hot car.
- Refrigerate leftovers within two hours. If the weather is warm (over 85 degrees F) or the food was left in a hot car, then the time limit is just one hour.
- Thoroughly reheat leftovers before eating. Don't reheat in plastic wrap, a doggy bag, pizza box or Chinese food container because they are not microwave-safe and won't withstand high heat.
- Microwave leftovers to reheat, but use a lid or vented plastic wrap to help ensure thorough heating.
- Discard any leftovers that don't look right or that smell strange. Just make sure pets can't get to these rejects.
- Do not keep leftovers for more than a couple of days.

—Diane Van

# Microwave-Safe for Baby

by CiCi Williamson, C.H.E.\*  
and Grace Cataldo, C.H.E.



**I**t's 2 a.m. You grope toward the glow of the night light and scoop up the wailing baby. Finding a nurser half-filled with formula from the 10 o'clock feeding, you zap it in the microwave and sigh with relief as the toothless gums close on the nipple.

But this silence could come at a high price. You may have put your baby at risk from burn injuries or food poisoning.

## Heating Bottles in the Microwave

Studies show that microwaves heat baby's milk and food unevenly. Resulting "hot spots" can scald a baby's mouth and throat.

Dr. Madeline Sigman, R.D., a food scientist at Pennsylvania State University, is completing a study on microwaving infant formula. She said, "When formula is microwaved, heat accumulates in the top of the bottle. So shake well and test the temperature by shaking some of the liquid on top of your hand. The wrist is one of the areas

least sensitive to heat. Don't test there."

Playtex, Evenflo and Gerber unanimously recommend against microwaving formula in nursers with disposable plastic inserts. Hot spots in milk heated in these bottles may weaken the seams, causing the plastic to burst and spill hot milk on the baby.

To heat a bottle with a disposable insert, place it under hot tap water until the desired temperature is reached. This should only take a minute or two. Or heat water in a pan, remove it from heat and set the bottle in it.

Hard plastic and glass baby bottles can be warmed in this same manner or in the microwave if you remove the cap and nipple first. For 8 ounces of milk or formula at refrigerator temperature, microwave on high 30 seconds. Let stand for a minute.

As with other warming procedures, shake the liquid to even the temperature and test before using.

## Heating Solid Foods

Microwaving solid baby foods in the jars is not recommended. Robert F. Schiffmann, a leading expert in

microwave product development, presented a paper at the International Microwave Power Institute annual symposium in 1990 documenting uneven heating.

He measured the temperature of various baby foods in jars at three depths and nine spots. The center of the foods reached 170 to 200° F. The coolest place, 48° F, was next to the glass sides. So pulling the jar out of the microwave could lead you to believe the food is not too hot.

However, if the foods are transferred to a dish, Schiffmann found they could be microwaved if stirred and taste-tested for temperature before feeding.

"Babies should not be fed foods heated higher than 90 to 120° F," according to the Gerber Products Company. In the microwave, this temperature is reached when 4 ounces of solid food in a dish are heated for about 15 seconds on high power. Always stir, let stand 30 seconds and taste-test before using. Food that's "baby-ready" should feel lukewarm to you.

Since fats heat faster in a microwave than other substances, do not microwave baby food meats, meat

\*Certified Home Economist



sticks or eggs. These foods have a high fat content which can cause splattering and overheating.

## Handling Baby Foods Safely

Back to that early morning bottle: your baby might get food poisoning if you give him or her leftovers from a previous feeding. Harmful bacteria from the baby's mouth can be introduced into the formula where it can grow and multiply even after refrigeration and reheating.

The same thing can happen if a baby is fed straight from a jar of baby food. Saliva on the spoon contaminates the remaining food.

Milk, formula or food left out of the refrigerator more than 2 hours may be unsafe. Also, you should not leave a bottle in the crib with an older baby where it might be imbibed over many hours.

Even a small "dose" of harmful bacteria can make a tiny baby sick.

Follow the manufacturer's recommended procedure for preparing bottles before filling with formula or milk. Observe the "Use-by" dates on formula cans.

See our baby food storage chart for holding times. Don't feed a baby anything kept longer.

If making homemade baby food, use a brush to clean areas around blender blades or food processor parts. Old food particles can harbor harmful bacteria that may contaminate other foods.

Use detergent and hot water to wash and rinse all utensils (including the can opener) which come in contact with the baby's foods.

If using commercial baby foods, check to see that the safety button on the lid is down. If the jar lid doesn't "pop" when opened, do not use. Discard jars with chipped glass or rusty lids.

To freeze homemade baby food, put the mixture in an ice cube tray. Cover with heavy-duty plastic wrap until the food is frozen. Then pop food cubes into a freezer bag or airtight container and date it. Store up to 3 months. One cube equals a serving.

Small jars can also be used for freezing. Leave about 1/2 inch of space at the top because food expands when frozen.

## SAFE STORAGE OF BABY FOOD

*NOTE: Don't leave baby food solids or liquids out at room temperature for more than 2 hours.*

	REFRIGERATOR	FREEZER
<b>LIQUIDS</b>		
Expressed breast milk	5 days	3 to 4 months
Formula	2 days	not recommended
Whole milk	5 days	3 months
Reconstituted evaporated milk	3 to 5 days	not recommended

### SPECIAL HANDLING:

1. For shelf storage of unopened cans of formula, observe "Use by" dates printed on containers. Store evaporated milk up to 12 months.
2. Heat liquid in disposable bottles in hot tap water, not in the microwave.
3. If heating glass or hard plastic bottles in the microwave, remove the cap and nipple first.
4. Shake bottle before testing the temperature on top of your hand.
5. Discard any unused milk left in a bottle.

### SOLIDS - opened or freshly made

Strained fruits and vegetables	2 to 3 days	6 to 8 months
Strained meats and eggs	1 day	1 to 2 months
Meat/vegetable combinations	1 to 2 days	1 to 2 months
Homemade baby foods	1 to 2 days	3 to 4 months

### SPECIAL HANDLING:

1. Observe "Use by" date for shelf storage of unopened jars.
2. Check to see that the safety button in lid is down. If the jar lid does not "pop" when opened or is not sealed safely, do not use.
3. Do not heat meats, meat sticks, eggs or jars of food in the microwave.
4. Transfer food from jars to bowls or heating dish. For 4 ounces of food, microwave on high 15 seconds; stir and let stand 30 seconds.
5. Stir and test the temperature of the foods before feeding baby.
6. Don't feed a baby from the jar.

When traveling with baby, transport bottles and food in an insulated cooler. Place the ice chest in the passenger compartment of the car. It's cooler than the trunk. On airplanes, placing frozen gel packs in an insulated bag should keep the food safe.

If leaving the baby in the care of a sitter or family member, give explicit instructions for warming and handling bottles and food. Don't assume the person knows about baby foods and your appliances.

## Nutrition Issues

There's no nutritional reason that food and formula should not be micro-

waved. However, overheating liquids or foods by any method can cause some nutrient destruction.

Parents interested in health foods may consider using honey as a sweetener to entice babies to drink water from a bottle. Honey is not safe for children less than a year old. It can contain the botulinum organism that could cause illness or death.

Consult your doctor about your baby's nutrition requirements. When it's a question about baby food safety, call the USDA Meat and Poultry Hotline at 1-800-535-4555, 10 to 4 weekdays. Washington, D.C., area residents, call 202-720-3333. ☎



# Daycare and Food Safety—Emerging Issues

by Mary Ann Parmley

**T**he numbers alone will stop you. By 1999, the experts say, 8 out of 10 American children will be in daycare.

Could this pose a health risk? "Yes," said Dr. Larry Pickering, a recognized authority on pediatric infectious diseases at the University of Texas in Houston.

"Pre-school youngsters are particularly prone to foodborne and other infectious diseases," Pickering explained. "Young children have immune systems too immature to give much protection. You've got kids at close quarters sharing toys and blankets. There are diapering and food activities, and children this age constantly put everything in their mouths. It's an ideal set-up for the spread of illness."

In fact, research Pickering did a few years ago showed children in daycare 30 percent more likely to contract diarrheal

illness than children cared for at home.

"There is a real need to provide daycare workers with special training in food and formula handling as well as in the control of infectious disease," said Dr. Susan Aronson, who is working through the American Academy of Pediatrics to improve the quality of daycare nationwide. Dr. Aronson is a clinical professor of pediatrics at the Hahnemann Medical Center, Philadelphia, Penn.

Recognizing that need, national health and social service agencies are moving ahead with commendable speed.

The American Red Cross, with the American Academy of Pediatrics and the National Academy of Sciences, has developed an accredited Child Care Course to train childcare workers in everything from first aid, food handling and preventing infectious disease to

communicating with children and parents. The course, divided into seven short training modules which can be taken at the worker's convenience, will help workers pass newly-instituted local requirements. For more information, contact the local chapter of the American Red Cross. In some places, scholarship money can be arranged for qualified applicants.

To improve overall standards for daycare centers, guide licensing boards, and make vital information available to childcare professionals and parents, the American Public Health Association and the American Academy of Pediatrics recently published the comprehensive *National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs*.

Covering family daycare (where a few children are cared for in someone's home), group daycare (7 to 12 youngsters in someone's home) and child care centers, the directives span all aspects of health and safety. The manual (\$50) is available from Publication Sales, APHA, 1015 15th Street, N.W., Washington, D.C. 20005.

Health professionals are designing courses and setting up new licensing standards. What can parents and childcare providers do to protect our preschool children's wellbeing?

A lot. The chart "Improving the Health of Daycare" gives general information on how a safe, well-run center should operate. There is also a special section on food handling tips for both parents and daycare workers.

"I like to keep a positive perspective," said Dr. Janet Mohle-Boetani, a CDC epidemiologist who was in Lexington, Ky., last year as a community educator to help stop a shigella outbreak in daycare centers. "Sanitation in daycare can be a real problem. But, from the epidemiological viewpoint, daycare centers can be viewed as 'communities' where infection control practices can be put in place and monitored."

Doubtless that's the key—in daycare, as elsewhere, keeping children healthy depends on knowing the rules and following them. ☺

## The Pathogen Problem

Experts currently mention six pathogens as important in outbreaks of daycare center illness. *Shigella*, a bacteria that causes diarrhea and can be transmitted by infected people to food or water, causes "15,000 to 20,000 reported cases of shigellosis per year, mostly in children under 4," according to Dr. Dean Cliver in *Foodborne Diseases*, 1990.

*Cryptosporidium*, a microscopic parasitic protozoan which causes mild to severe diarrhea, is an emerging problem. When ingested, cysts carrying the protozoan migrate to the small intestine where they cause illness. Infants and AIDS patients are particularly vulnerable.

Hepatitis A, *Giardia*, *E. coli* and common viral infections are also showing an upswing in daycare settings. Carried on human hands and in infected stool particulates, water and food, these pathogens demand careful control, especially in daycare situations where there is repeated diaper changing and young children are putting *everything* in their mouths.

## Improving the Health of Daycare\*

In well-run centers, the following health rules should be standard operating procedure:

- There should be adequate refrigeration and reheating facilities for foods and beverages.
- Diaper-changing, potty-training and toilet areas should be kept scrupulously clean and stationed away from food preparation and eating areas.
- Used diapers and wipes should be stored in closed containers that are removed daily.
- Items children touch, particularly things that "go in the mouth," should be sanitized regularly.
- Children should never share Kleenex or washcloths, and their personal belongings—tooth and hair brushes, clothing and pajamas—should be labeled and kept separate.
- Ample space for ventilation should be left between cribs, beds, cots and nap rugs so that children don't pick up each other's "bugs." Staff can alternate the head-to-foot position of beds so children's heads aren't lined up in a row. This reduces the spread of infection.
- The center should be vigilant on vaccination requirements and have a well-defined, professionally verified policy on illness exclusion—when and for what reasons ill or contagious youngsters cannot come in.

For in-depth information, order "Healthy Young Children: A Manual for Programs" (\$15), National Association for the Education of Young Children, 1834 Connecticut Ave., N.W., Wash., D.C. 20009-5786, 202-232-8777.

*Note: A fine 16-minute video on the importance of handwashing for daycare children and staff ("ABCs of Clean," \$10) is available from the Soap & Detergent Association., 475 Park Ave., New York, N.Y. 10016, 212-725-1262.*



### FOOD HANDLING

PARENTS	DAYCARE WORKERS
<ul style="list-style-type: none"> <li>• Formula - Pour into bottles labeled with your child's name. Cap and refrigerate. Place in center refrigerator as soon as you arrive</li> <li>• Breast milk - Put in labeled bottles or liners. Refrigerate or freeze. Refrigerate on arrival at the center.</li> </ul>	<ul style="list-style-type: none"> <li>• Accept from parents only sealed bottles of formula or breast milk labeled with the child's name. Discard any leftover bottle contents—milk, water or juice—unrefrigerated over 2 hours.</li> </ul>
<ul style="list-style-type: none"> <li>• Lunches, snacks - Make sure any perishable snacks for your children are refrigerated at the center.</li> </ul>	<ul style="list-style-type: none"> <li>• Serve food sent from home only if properly covered and refrigerated. It should look safe and wholesome. CAUTION: Never taste suspect food. It could make you sick.</li> </ul>
<ul style="list-style-type: none"> <li>• Handwashing - As soon as children can understand, stress handwashing after toileting and before eating.</li> </ul>	<ul style="list-style-type: none"> <li>• Handwashing - Teachers and children should wash hands after toileting, messy play and before eating.</li> </ul>
	<ul style="list-style-type: none"> <li>• Meal management - Don't let children share foods or utensils. Discard food left on plates.</li> </ul>

\*These recommendations are based on American Red Cross, American Academy of Pediatrics, Centers for Disease Control (CDC) and U.S. Department of Agriculture guidelines.



# The Cornell Survey— Investigating How Consumers Prepare Food at Home

by Sue Mantey

For over a year, Dr. Robert Gravani and a team of researchers at Cornell University, Ithaca, N.Y., have been investigating what consumers know about food safety and how they handle food at home.

More than 850 households completed a 49-question survey the researchers mailed out nationwide.

"The results were somewhat surprising," said Gravani. "First, we found that higher education doesn't necessarily correspond to better test scores." Scores rose with educational levels through two years of college then fell with further education. Could this be because those with advanced degrees spend less time cooking?

"Second," Gravani said, "we found that someone may know something in theory but not be able to put that knowledge into practice." In other words, consumers need to understand both the reasons behind safe food handling rules and *how* to handle food properly in real-life situations.

How theoretical/practical is your knowledge of safe food handling?

Try these questions from the Cornell survey. Then we'll tell you how the respondents answered and what the correct answers are.

## Test Yourself—Sample Questions from the Cornell Survey

Circle one answer

- How concerned would you be about uncooked, unfrozen meat or poultry being left at room temperature for over 4 hours?  
Very concerned, concerned, not concerned, not sure
- Salmonella is most likely associated with...?  
Canned foods, infected cuts on the hand, undercooked pork, raw eggs and poultry, not familiar with term "salmonella"
- Do you ever eat foods that contain raw uncooked eggs, such as cookie batter, Caesar salad, homemade eggnog, homemade mayonnaise or homemade ice cream?  
Yes, no, not sure
- If you suspected that a food might cause foodborne illness would you taste it to determine its safety?  
Yes, no, not sure

## And the answers are...

- Over 80 percent surveyed would be very concerned or concerned about the safety of meat and poultry (cooked) left unrefrigerated over 4 hours. The maximum time perishable food can be left out is 2 hours.
- Seventy-four percent of those surveyed knew that salmonella is most likely associated with raw eggs and poultry. Generally, botulism is associated with canned foods, staphylococcus with infected skin cuts and trichinosis with undercooked pork. Recently *Salmonella enteritidis* has been found in some raw eggs and various types of salmonella have been found on raw poultry.
- Although consumers seemed to know the definition of salmonella, 42 percent would eat foods containing raw eggs. There has recently been a rise in *S. enteritidis* infections, so don't eat raw eggs or foods containing raw or undercooked eggs.
- NEVER, never taste suspect food to determine its safety. While 85 percent of respondents answered this question correctly, we still worry about those folks who could get *very* sick ingesting contaminated food. It takes only the smallest exposure to botulinal toxin, the cause of botulism, for instance, to produce severe health problems.

## Other findings?

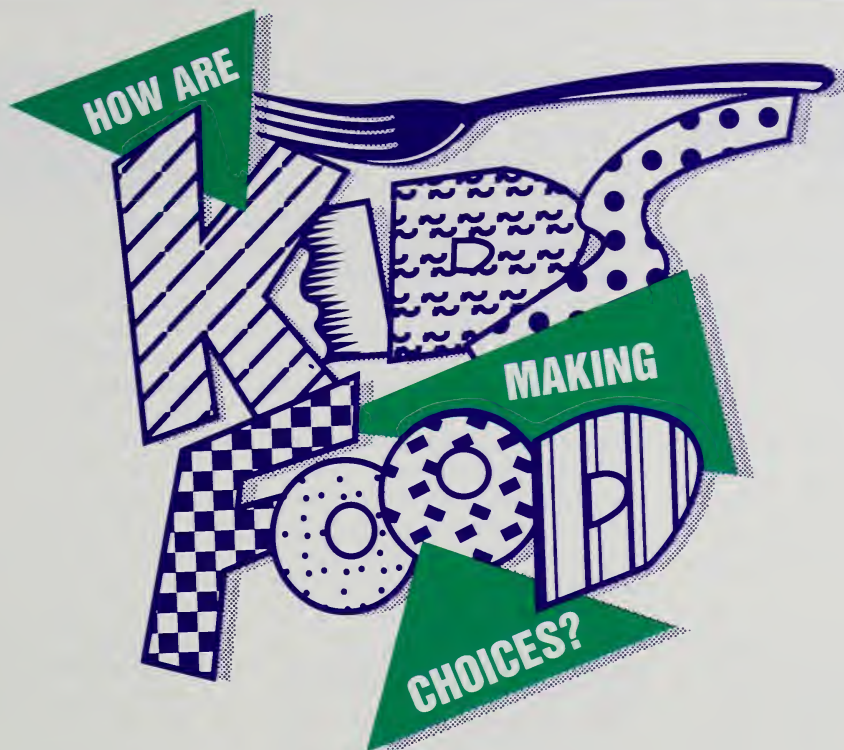
Good: Fifty-three percent of consumers surveyed knew that both knife and cutting board should be washed with soap and water after being used to cut fresh meat and before chopping vegetables.

Bad: Over 50 percent of respondents would refrigerate a large quantity of leftover stew in a deep container. This can allow foodborne bacteria to grow in the inner portion of stew, which will take some time to cool. It's better to divide large portions of leftovers into smaller storage containers for quick cooling.

General: Respondents under age 35 showed the most need for additional food safety education, while all age groups felt television was the most "convenient" way to acquire food handling knowledge.

What did the survey accomplish? "Our findings will help food professionals develop consumer education programs tailored both to what people need to know and to the most effective ways of reaching them," said Donna Williamson, a survey researcher now an Army food scientist at Ft. Lee, Va. ☉





by Laura Fox

**T**he good news is that today's youngsters understand the basic nutrition concept "you are what you eat."

A 1991 nationwide Gallup Survey shows 94 percent of children grades 4 through 8 feel the food they eat can affect their future health.

Ninety-eight percent recognize the importance of eating plenty of fruits, vegetables and high-fiber foods like whole grain breads and cereals.

And 99 percent understand the importance of exercise in maintaining good health.

Sue Ann Ritchko, administrator of the U.S. Department of Agriculture's Human Nutrition Information Service, said this basic level of understanding provides a good foundation for USDA's continuing efforts in nutrition education.

Ritchko said she was pleased that the results of the survey showed youngsters have a good understanding of the basic nutrition principles—balance, variety and moderation. Eighty-four percent agreed it's best to eat small amounts of many different foods and

not too much of any one thing. Ninety-seven percent agreed that foods like ice cream, cookies and chips are okay to eat, but not all the time. Also, only 18 percent said they believe it's okay to "eat anything you want, whenever you want to."

But the survey also indicated that children may be picking up some adult misperceptions about foods being either all "good" or all "bad." Eighty-five percent of children surveyed said "to eat healthy you should avoid all high-fat foods" and 77 percent agreed that "you should never eat foods with large amounts of sugar."

Ritchko said this perception by adults of "good" and "bad" food has been identified in USDA research studies also. "The truth is it's your total diet that counts—not just one food or one ingredient."

To help people make healthful eating choices, USDA and the U.S. Department of Health and Human Services developed the *Dietary Guidelines for Americans*. These guidelines are intended for healthy Americans 2 years and older. They

encourage people to eat a variety of foods—including plenty of vegetables, fruits, and grain products—without consuming too many calories or too much fat, saturated fat, cholesterol, sugars, sodium and alcohol.

To order a single, free copy of *Dietary Guidelines for Americans*, write Consumer Information Center, Department 514-X, Pueblo, CO 81009. In some of the guidelines special suggestions are given for children.

Ritchko said parents and others who are concerned about making healthful lunches, snacks and desserts for kids may want to try the helpful hints and tasty recipes included in *Making Bag Lunches, Snacks and Desserts Using the Dietary Guidelines*. This 32-page book is available for \$2.50 from the Consumer Information Center, Department 70, Pueblo, CO 81009.

For more information about a healthful diet and the Dietary Guidelines, write to: Human Nutrition Information Service, 6505 Belcrest Road, Room 362, Hyattsville, Md. 20782. ☛

## NEWSWIRES

### What's in the Beef?

There's more to beef these days than meets the eye. The reason? Producers are running hard to develop new "low fat" beef products to keep pace with consumer demand for reducing saturated fat and cholesterol.

Americans eat an estimated 7 billion pounds of ground beef products every year—most of it containing at least 20 percent fat. Reformulated ground beef products carrying the "low fat" label must contain no more than 10 percent fat.

To achieve that reduction—but retain taste and texture—producers are *adding* a variety of mixtures to beef ranging from soy proteins to oat bran and seaweed derivatives like carrageenan.

The new products are being marketed everywhere from fast food counters to school lunch cafeterias and your local grocery store. Quaker Oats has developed LeanMaker, an oat bran fat replacer used to make "lean beef patties." The beef product Hometown Butcher uses modified dairy solids to replace beef fat and still provide desirable taste and texture.

The U.S. Department of Agriculture is working hard on new labeling requirements to make sure all products are correctly labeled. According to Robert Post, chief of USDA's Standards Branch, "It's important for everyone, especially people with food allergies, to know what's in the foods we eat."

When consumers buy a meat product, said Post, we want them to know what they're biting into.

—Dianne Durant

### Testing for Two Bacteria with One Growth Medium

In a research breakthrough that could save \$5 to \$7 million a year on testing food samples for salmonella and listeria,

researchers at USDA's Agricultural Research Service (ARS) in Athens, Ga., have developed a single growth medium that can be used to prepare both bacteria for testing.

Today testers must incubate suspect food samples separately for 24 hours in preparation for testing for either salmonella or listeria.

ARS researchers Dr. J. Stan Bailey and Dr. Nelson Cox explained that industry and USDA's Food Safety and Inspection Service now run about seven million tests for salmonella and four million for listeria annually. This is to assure that processed, ready-to-eat meat and poultry products meet the legal requirement that they contain no bacteria known to cause human illness.

Why is it necessary to incubate suspect food samples in a special nutritional broth before taking a final cell count? "Ready-to-eat products, like hotdogs and cold cuts, are cooked and treated in ways that normally destroy harmful bacteria. When these processes fail, however, you can have some live and some injured bacteria still present in the food," said Dr. Bailey.

An incubation period makes it possible to get an accurate count of any bacterial cells still present in a suspect food sample.

"Switching to a single growth medium could effect tremendous time and money savings in food safety testing with no loss in accuracy," said Bailey.

For further information, call Dr. J. Stan Bailey or Dr. Nelson Cox, ARS, Athens, Ga., 404-546-3356.

—Mary Wenberg, R.D.

### Auburn University Scientists Take Fat Out of Sausage

Food scientists at Auburn University in Auburn, Ala., have developed a low-fat sausage, called AU Lean, that has 70 percent less fat and about half the calories of traditional pork sausage.

When cooked, AU Lean is 9 percent fat, compared to 31 percent for tradi-

tional pork sausage.

In addition to reduced fat, AU Lean contains only 96 calories per two-ounce serving, compared to 210 calories for a comparable serving of traditional pork sausage.

And best of all, for sausage lovers, AU Lean tastes great. The sausage has gotten rave reviews in two taste tests.

AU Lean will be available in patty, link and bulk pack form. Several major grocers are planning to market the sausage in the Southeast and Northeast. Numerous other food chains, restaurants and organizations have also expressed interest.

The research team, headed by Dr. Dale Huffman, a professor of meat science at Auburn University, previously developed AU Lean ground beef, adopted by McDonald's for its McLean Deluxe sandwich and sold nationally by several large grocery chains.

"The challenge has been greater in making a low-fat sausage product than in making AU Lean ground beef," said Huffman. "A higher percentage of fat had to be replaced in the pork product, plus the final mix had to blend acceptably with the pork sausage seasonings."

As in AU Lean ground beef, carrageenan, a seaweed derivative, is the key to reducing fat content. Carrageenan, in combination with added moisture, keeps the low-fat sausage moist and texturally satisfying.

The potential benefits of AU Lean sausage and ground beef are astounding. "Using AU Lean formulations for sausage and beef would reduce America's fat consumption by about three pounds per person per year," Huffman said.

For additional information, contact Dr. Dale Huffman at Auburn University, 205-844-1517.

—Liz Lapping



## ENFORCEMENT ACTIONS

The Food Safety and Inspection Service (FSIS) investigates violations of federal meat and poultry inspection laws. Those products found in violation can be seized, detained or voluntarily recalled. Companies that violate the law are subject to criminal, administrative or civil penalties. Here are some recent actions:

**PRODUCT:** Whole fresh turkeys.  
**COMPANY:** Roger Williams Foods, Cranston, R.I.  
**VIOLATION:** Selling and transporting adulterated turkeys.  
**ACTION:** Firm fined \$20,000 and put on 3 years' probation.

**PRODUCT:** Various meat and poultry products.  
**COMPANY:** G & H Poultry and Provisions, Inc., Boston, Mass.  
**VIOLATION:** Selling and offering for sale adulterated products.  
**ACTION:** Company is no longer in business. Former president was fined \$5,000 and sentenced to 3 years' probation. Former vice president was fined \$3,000 and sentenced to 3 years' probation.

**PRODUCT:** Ungraded beef.  
**COMPANY:** Superior Beef Products, Albany, Ore.  
**VIOLATION:** Selling beef labeled "USDA Choice" when the beef was actually ungraded.  
**ACTION:** Gregory Enright, owner of firm, fined \$10,000 and sentenced to 3 years' probation. Enright must

also pay \$3,372 restitution to the University of Oregon.

**PRODUCT:** Corned beef briskets.  
**COMPANY:** Liberman Products Corp., Detroit, Mich.  
**VIOLATION:** Preparing misbranded briskets for sale.  
**ACTION:** Withdraw inspection services unless firm abides by various provisions of a consent decree, including no further violations of the Federal Meat Inspection Act.

**PRODUCT:** Pork sausage.  
**COMPANY:** Garofalo Food Agency, Inc., Schenectady, N.Y.  
**VIOLATION:** Selling and conspiring to sell uninspected pork sausage to restaurants.  
**ACTION:** Firm and two officials (John and Gary Garofalo) fined a total of \$7,211. Firm and both officials placed on probation for 1 year.

— Herb Gantz



*To hear the latest food safety information, call  
 USDA's Meat and Poultry  
 Hotline*

**1-800-535-4555**

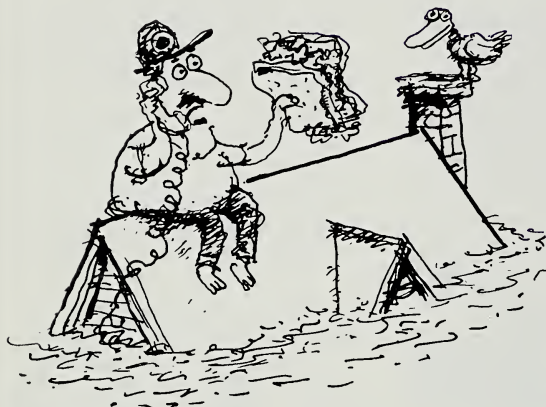
*10:00 am–4:00 pm Eastern Time  
 (Washington, DC 202-720-3333)*

*A public service of this publication and the  
 U.S. Department of Agriculture*



IN THE SPRING ISSUE

# Getting Ready for the STORM Season



**“We** get most of our storm calls in late spring and early summer,” says Susan Conley, manager of USDA’s Meat and Poultry

Hotline. "People are often very upset wondering what to do with their food after a major disaster."

This year we're getting a jump on the season. The Spring issue of *Food News* will carry a handy 4-page supplement on "Disaster Drills—How to Handle Food Through a Tornado, Flood, Hurricane or Earthquake."

Read *Food News* and be prepared.

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